

## SHORT COURSE T1/P1

### VIBRATION PROBLEMS and SOLUTIONS in PUMPS and TURBOMACHINERY



**Bill Marscher, P.E.**, is President and Technical Director of Mechanical Solutions, Inc., where he and other staff perform design, analysis, testing, and troubleshooting of pumps and miscellaneous turbomachinery. Bill has over 40 years of hands-on as well as design experience with rotating machinery in the aerospace, power, and process industries. Bill is presently one of the US representatives to the ANSI/ ISO Machinery Acoustics and Vibration Standards Committee ISO TC108/S2, is past Board Chair of the Society for Machinery Failure Prevention Technology (MFPT), and is past President of the Society of Tribologists & Lubrication Engineers (STLE). He is an Hydraulic Institute Standards Partner, and is a ten-year veteran of the TAMU Pump Symposium Advisory Committee.



**Paul A. Boyadjis** is Manager of Turbomachinery Analysis at Mechanical Solutions, Inc. (MSI), in Whippany, New Jersey. He has over 28 years of diverse experience in the analysis and design of rotating equipment. His specialty includes complex 3D solids modeling of pump and compressor casings and rotating assemblies, and the performance of stress and vibration analysis using advanced finite element techniques. Mr. Boyadjis has worked as a lead analytical engineer for major compressor and pump manufacturers such as Ingersoll-Rand, Ingersoll-Dresser Pump, and Flowserve Corporation. Mr. Boyadjis has a BS and MS in Mechanical Engineering from Lehigh University. He is a member of the API Machinery Standards Committee and a Standards Partner of the Hydraulic Institute.

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**Eric J. Olson** is the VP of Engineering at Mechanical Solutions, Incorporated. He's a graduate marine engineer with about thirty years of experience in turbomachinery. Previously he was a field engineer and then regional manager at Dresser Industries.



**Maki M. Onari** is Manager of Turbomachinery Testing at Mechanical Solutions, Inc. (MSI), in Whippany, New Jersey. He is responsible for field vibration testing involving ODS and Modal analysis. His career spans more than 16 years primarily working with rotating equipment analysis and troubleshooting in the petrochemical, refinery, and power generation industries. Prior to joining MSI, Mr. Onari was a Rotating Equipment Engineer in PDVSA-Venezuela responsible for the predictive maintenance of one of the largest petrochemical complexes in Latin America. Mr. Onari received his B.S degree (Mechanical Engineering, 1996) from the Zulia University in Venezuela. He is a member of ASME and the ISO TC108/S2 Standards Committee for Machinery Vibration.

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